

ABSTRACT

A light emitting apparatus includes a source of light for emitting light; a down conversion material receiving the emitted light, and converting the emitted light into transmitted light and backward transmitted light; and an optic device configured to receive the backward transmitted light and transfer the backward transmitted light outside of the optic device. The source of light is a semiconductor light emitting diode, a laser diode (LD), or a resonant cavity light emitting diode (RCLED). The down conversion material includes one of phosphor or other material for absorbing light in one spectral region and emitting light in another spectral region. The optic device, or lens, includes light transmissive material.